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MAY 18 1994

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

May 18, 1994

EX PARTE

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: *GEN. Docket No. 90-314, Personal Communications Services*

Today, Lyn Daniels, Pacific Bell's Vice President - Personal Communications Services, Jim Tuthill, Senior Attorney, and I met with Thomas Stanley and Fred Thomas, Office of Engineering and Technology, and Byron Marchant of Commissioner Barrett's office to discuss issues under reconsideration in Gen. Docket No. 90-314. The attached document was provided during the presentation. Please associate this material with the above-referenced proceeding.

Two copies of this notice are being submitted to the Secretary of the FCC in accordance with Section 1.1206(a)(1) of the Commission's Rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

Alan F. Ciamporcero

Attachment

cc: Thomas Stanley
Fred Thomas
Byron Marchant

No. of Copies rec'd 0+1
List ABCDE

PACIFIC BELL®
A Pacific Telesis Company

Personal Communications Services

Bringing Mobility to the Mass Market

MAY 18, 1994

MAIN POINTS FOR TODAY'S DISCUSSION

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1. Market Structure: Additional large bands needed

2. Cellular Participation: Commission's September decision was correct

3. Roaming: Ensure interoperability, where technically compatible, and thus increase value of PCS licenses

4. Power Levels: PCS cell size must be competitive with cellular

Pacific Bell and TTL have done considerable original work on PCS demand, technology, and auction dynamics.

PROPOSED MARKET STRUCTURE

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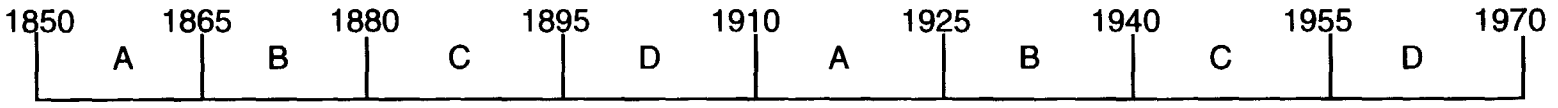
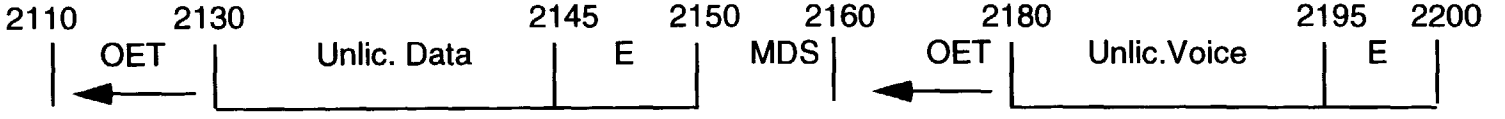
Four 30 MHz licenses in lower bands:



One 10 MHz license and 30 MHz unlicensed in upper bands:



Room to Expand

Room to Expand

1. MARKET STRUCTURE SHOULD BE REBALANCED IN SIZE AND LOCATION.

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ELEMENT	RECOMMENDATION	RATIONALE
Number and Size of Licenses	- Four at 30 MHz in lower band - One at 10 MHz in upper band	- Less microwave congestion in lower band - Lower band best for wide area services - Increases competition - Value-creating licenses - Equipment more readily available
Unlicensed PCS	- 30 MHz in upper band	- Upper bands best for localized applications - Microwave relocation easier - Room to expand unlicensed allocation - If "E" channel not acquired, allocate to unlicensed - UTAM established to manage microwave relocation
Serving Area Size	- All licenses cover MTAs	- Market research shows need to serve broader areas - Meet competitive "footprints" of cellular companies - MTAs facilitate roaming and interoperability - MTAs simplify auction process - Supports simultaneous auction design

CELLULAR PARTICIPATION

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- In its September Order, the Commission said "competitive benefits may be reduced if cellular incumbents are permitted to acquire PCS licenses within their service areas." Para. 97

- "One of the public policy goals of this proceeding should be to create opportunities for greater competition in the provision of cellular-like mobile telephone services. Allowing incumbent cellular firms, ... to acquire another 30 MHz of spectrum in the PCS band would not advance this pro-competitive goal."
  - Letter to James Quello from Larry Irving, NTIA, September 14, 1993, p. 3.

DIGITAL TECHNOLOGY FOR CELLULAR ONE IN NEW YORK

The Cellular One unit of McCaw Cellular Communications has put into effect digital technology that triples the capacity of its cellular telephone system in the New York metropolitan area. The new equipment will also enable services like paging and electronic mail. Cellular One is using time-division multiple-access technology, which allows cellular operators to transmit three times as much data onto a given radio channel as conventional analog signals.

Cellular One's competitor in the New York cellular market, the Nynex Corporation, is installing code-division multiple-access technology, a more expensive system that increases capacity by a factor of 10. Nynex plans to deploy its technology next year. Customers will have to choose between the two systems when they upgrade to digital, because they are incompatible. (Bloomberg Business News)

THE NEW YORK TIMES, FRIDAY, APRIL 1, 1994

2. CELLULAR PARTICIPATION MUST BE RESTRICTED TO ENSURE COMPETITION.

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- Cellular companies already have their fair share of spectrum.

  - Their spectrum is clear of microwave interference and it has superior propagation.
  - They are not excluded from offering Personal Communications Services
  - They also can acquire large licenses in new areas

- Cellular participation in large PCS licenses would be poor policy.

  - Reduces the number of potential wireless competitors
  - Supports high cellular prices and is bad for customers
  - Lessens the incentive for cellular companies to make more efficient use of their analog systems (see New York Times article, April 1, 1994, attached)
  - Permits cellular aggregation of more spectrum than new entrants

- Therefore, retain the current limits on cellular participation.

  - 40 MHz aggregation limit
  - 20% attribution standard
  - 10% overlap threshold

3. ROAMING AND INTERCONNECTION MUST BE PERMITTED.

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- Roaming and interconnection permits customers to use their handsets between different providers, technologies and frequencies when outside their "home" territory.

- Roaming and interoperability extend the Commission's long-standing policies supporting ubiquitous origination and termination of calls and interconnection among networks.

  - Evolution in the cellular industry toward increased portability of features
  - Avoid "islands of service"
  - Meet customer needs

- NTIA supports roaming also: "... the Commission should adopt rules requiring interoperability and seamless roaming among license areas and among providers...."
  - Letter to James Quello from Larry Irving, NTIA, September 14, 1993, p. 5, fn. 6.

Roaming is good for customers and will increase the value of the licenses.

POWER LEVELS

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- The low power limit (100W EIRP) will require many more cells than otherwise necessary to provide service and to meet build-out requirements.

Effects of additional loss based on RF Link Budget Analyses:

Cell Radius (miles)

	Indoor Suburban	Suburban	Urban
PCS System	1.8	3.5	1
Cellular Systems	3.5	6.8	2.7

Number of Cells Required

	In-Building Suburban	Suburban	Urban
PCS System	43	12	8
Cellular Systems	11	3	1

Coverage: Suburban, 360 sq. mi., Urban, 18.7 sq. mi.

4. POWER LEVELS MUST PROVIDE CELL SIZES AND PROPAGATION THAT ARE COMPETITIVE WITH CELLULAR.

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- PCS operators will encounter propagation losses at PCS frequencies (~ 9dB).

- Our analysis (FCC visit February, 1994) indicates that 2500 watts ERP are needed by PCS operators to achieve reasonable propagation characteristics with cellular (at 500 watts ERP).

- "The commission should not... impose on PCS licensees power and antenna height limitations that are more restrictive than those allowed to cellular operators."

  - 90-134, Comments of the Department of Justice, November 9, 1992, p. 9.

Pacific endorses the FCC staff's consideration of higher antenna gains in order to provide required power to ensure reliable links.

CLOSING REMARKS

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- Beyond the stated advantages, Pacific Bell's plan is:
  - Implementable based on the Commission's First Report and Order
  - Addresses allocation inefficiencies
  - Accelerates time to market
  - Increases auction values
- The Commission should continue to optimize the four objectives it seeks via this proceeding.
- The Commission should adopt rules which provide sufficient value creation potential for new PCS licensees.
- The Commission should reject attempts to stifle new competition.

Additional delay in auctioning and licensing PCS providers will extend the cellular duopoly and erode the value of PCS licenses.

WHY THE FCC SHOULD MANDATE ROAMING

The FCC should mandate that PCS providers have fair and nondiscriminatory access to cellular analog out-of-territory networks at any time and to cellular analog in-territory networks during the 10-year build-out period. This policy will benefit all customers because they will be able to use wireless services wherever they are even at the beginning of the PCS service offering. Absent such a policy, PCS providers will not have a fair opportunity to compete with cellular providers which have a ten to twelve year head start.

Market research and customer experience reveal that customers demand to use their wireless telephone wherever they go. As cellular networks have expanded across the nation, seamless national "roaming" service has become available to cellular wireless customers. The ability to roam is essential to public acceptance of PCS and to its competitiveness with cellular service. Without the ability to roam, PCS providers will only be offering an "island" service which will compare very unfavorably with cellular service and even with some of the Specialized Mobile Radio Services that are developing. PCS providers, however, may not be able to offer the necessary ubiquity that will permit true competition with cellular service.

There are two reasons why the ubiquity that is necessary for competition with cellular will be difficult to achieve. First, PCS providers will take several years to complete their wide area network construction. During this phase, unless they are able to roam on existing cellular systems, PCS providers will not be able to ensure ubiquitous service to their customers, resulting in limited public acceptance of PCS. Secondly, competitive consortium of cellular companies might form and create a "blockage" to roaming out-of-territory. A consortium may choose not to accommodate roaming customers from a PCS provider with which they compete in the PCS provider's licensed service area market. It could be to the consortium's economic advantage to damage a PCS provider's competitive position in its home territory by limiting the PCS provider's roaming options out-of-territory. Cellular companies will have an advantage if PCS provides "islands of coverage". Cellular carriers clearly understand this potential market disadvantage that PCS providers may have.

For example, Lee Cox, President of AirTouch, "estimated that it will take PCS carriers seven or eight years to deploy networks as ubiquitous as cellular and by that time cellular carriers will have improved their networks even further."[1]

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[1] Charles F. Mason, AirTouch Execs Say PCS Will Play Small Role, Telephony, April 18, 1994, at 12.

When cellular service was introduced into the marketplace, roaming was easily achievable for two reasons. First, there was one technical standard for the delivery of cellular service, so there were no significant technical barriers to roaming. Second, there was no competition for cellular wireless mobile services. Thus, it was in the cellular providers' best interest to enter into roaming agreements to create a ubiquitous service. Roaming would only enhance their service offerings. Cellular carriers provided access to their networks in order to gain reciprocal roaming agreements. However, as noted above, the current market in wireless provides a great incentive for existing cellular carriers to try to maintain their head start and to delay a ubiquitous PCS offering for as long as possible. While other PCS providers are also a source for roaming agreements, because they will just be starting their service, they will not offer the ubiquity that the current cellular providers offer. Thus, the roaming that other PCS providers offer is less desirable.

A solution to this significant problem would be achieved by allowing PCS providers to offer their customer access to wireless service on cellular analog networks (AMPS). This would be done by the use of a dual frequency/mode handset. Cellular companies would benefit from the additional revenue from "PCS roamers" while PCS customers would benefit by having access to a ubiquitous wireless network service. This concept is similar to

the Commission's position on cellular head start through the reselling of cellular service.[2] Because the service has now evolved to a national basis, it is critical that PCS providers be given a fair opportunity to compete with cellular providers which have ten to twelve years head start. By doing so, the Commission will enhance auction values and provide PCS an opportunity to develop into a fully competitive service.

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[2] In the matter of Petitions for Rulemaking Concerning Proposed Changes to the Commission's Cellular Resale Policies, CC Docket No. 91-133, Notice of Proposed Rulemaking and Order, 6 FCC Rcd. 1719, para. 16, 1991 ("With respect to facilities-based competitors in the cellular industry, one important public interest reason for prohibiting resale restrictions is to offset any competitive advantage one carrier may have because it is granted a construction permit prior to its competitor. Indeed, no one disputes the value of requiring resale prior to the time the second carrier in the market begins providing service to the public over its own facilities. If the lag time is significant between the first and second carrier's start of operations, the first carrier will have a significant opportunity to expand its coverage area while the second one builds out its system. Therefore, the rationale that supports resale of a competitor's services can continue to exist even after the second carrier's initial facility becomes operational.... However, once the second carrier is fully operational the rationale for prohibiting resale restrictions between facilities-based licensees may cease to exist.") See also 47 CFR. {22.914.